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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Robert L. Doubler

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EXAMINER

FERGUSON, MICHAEL P

ART UNIT

PAPER NUMBER

3679

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/733,160	<b>Applicant(s)</b> DOUBLER ET AL.	
	<b>Examiner</b> Michael P. Ferguson	<b>Art Unit</b> 3679	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>04/01/04</u> . | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the knurled surface claimed in claim 6, and the driving surface cooperating with a screwdriver claimed in claim 8 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

2. Claims 3, 4 and 17 are objected to because of the following informalities:

Claim 3 (line 5) recites "the fastener body". It should recite --the body member--.

Claim 4 (line 4) recites "said fastener". It should recite --said body member--.

Claim 17 (line 7) recites "the disengaged position". It should recite --the release position--.

For the purpose of examining the application, it is assumed that appropriate correction has been made.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 16 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 16 and 20 recite "wherein the self-locking taper is selected from the group consisting of Morse, Brown & Sharpe, Jarno, American National Standard Machine, Jacobs and British Standard". It is unclear as to what is positively claimed as standards frequently change.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-4, 11, 12 and 15-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Krüger et al. (US 6,712,544).

As to claim 1, Krüger et al. disclose a linear engaging headless fastener system comprising:

a body member 7 having an outer surface positioned about a central axis, the body member having a first end including a cavity, the cavity having an engaging surface, the engaging surface tapering inwardly from about the first end and extending toward a second end, the second end defining a clamping surface 16 (clamping on to tube 4) adapted to provide a clamping force to an assembly;

an expander member 14 having a first end, a second end, and an outer surface positioned about a central axis, the outer surface tapering outwardly from the first end and extending toward the second end, the first end being insertable into the body member cavity;

whereby the outer surface of the expander member is constructed and arranged for coaxial alignment and engagement with respect to the engaging surface of the body member, the expander member being linearly traversable with respect to the engaging surface of the body member between first release position and second engaged position, wherein the engaged position results in the tapered surfaces circumferentially

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expanding the body member provide compression loading of the expander member, wherein the body member outer surface engages an aperture **4** having an inner gripping surface, and wherein the release position results in circumferential contraction of the body member outer surface thereby releasing the inner gripping surface of the aperture (Figure 1).

As to claim 2, Krüger et al. disclose a system including means **16** projecting radially from the outer surface of the body member outer surface for engagement with the inner surface of the aperture **4** locking the body member **7** in a predetermined position (Figure 1).

As to claim 3, Krüger et al. disclose a system wherein the radially projecting means includes a outwardly and circumferentially extending rib **16**, each rib including a first ramp surface to facilitate coaxially aligned linear movement of the body member **7** in relation to the inner gripping surface the aperture **7** provide a secondary clamping force upon engagement of the expander member **14** (Figure 1).

As to claim 4, Krüger et al. disclose a system wherein the circumferentially extending rib **16** includes a second ramp surface to facilitate coaxially aligned linear insertion the body member **7** into the inner gripping surface of the aperture **4** (Figure 1).

As to claim 11, Krüger et al. disclose a system wherein the clamping surface consists of a flat point (flat surface; Figure 1).

As to claim 12, Krüger et al. disclose a system wherein the body member **7** is constructed of metal (metal cross-section; Figure 1).

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As to claim 15, Krüger et al. disclose a system wherein the engaging surface within the cavity is a self-locking taper.

As to claim 16, Krüger et al. disclose a system wherein the self-locking taper is selected.

As to claim 17, Krüger et al. disclose a system wherein the expander member **14** includes an internal bore extending inwardly from the first end of the expander member along a longitudinal centerline, wherein the internal bore is constructed and arranged for gripping and placing a tensile load on the expander member prior to linear traversal the expansion member into the disengaged position with respect to the body member **7** (Figure 1).

As to claim 18, Krüger et al. disclose a system wherein the internal bore includes internal threads **21** (Figure 1).

As to claim 19, Krüger et al. disclose a system wherein the outer surface of the expander member **14** includes a self-locking taper.

As to claim 20, Krüger et al. disclose a system wherein the self-locking taper is selected.

As to claim 21, Krüger et al. disclose a system wherein the outer surface of the expander member **14** and the inner engaging surface of the body member **7** are constructed and arranged to maintain an axially aligned interfitting relationship in the release position (Figure 1).

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-5 and 7-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Weller (US 3,618,135).

As to claim 1, Weller discloses a linear engaging headless fastener system comprising:

a body member **12,12''** having an outer surface positioned about a central axis, the body member having a first end including a cavity, the cavity having an engaging surface, the engaging surface tapering inwardly from about the first end and extending toward a second end, the second end defining a clamping surface **16,17** (clamping on to cavity **10**) adapted to provide a clamping force an assembly;

an expander member **20,20''** having a first end, a second end, and an outer surface positioned about a central axis, the outer surface tapering outwardly from the first end and extending toward the second end, the first end being insertable into the body member cavity;

whereby the outer surface of the expander member is constructed and arranged for coaxial alignment and engagement with respect to the engaging surface of the body member, the expander member being linearly traversable with respect to the engaging surface of the body member between first release position and second engaged position, wherein the engaged position results in the tapered surfaces circumferentially expanding the body member provide compression loading of the expander member, wherein the body member outer surface engages an aperture **10** having an inner



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gripping surface, and wherein the release position results in circumferential contraction of the body member outer surface thereby releasing the inner gripping surface of the aperture (Figures 2 and 6).

As to claim 2, Weller discloses a system including means **18'** projecting radially from the outer surface of the body member **12''** outer surface for engagement with the inner surface of the aperture locking the body member a predetermined position (Figure 6).

As to claim 3, Weller discloses a system wherein the radially projecting means includes an outwardly and circumferentially extending rib **18'**, each the rib including a first ramp surface to facilitate coaxially aligned linear movement of the body member **12''** in relation to the inner gripping surface the aperture provide clamping force upon engagement of the expander secondary member **20''** (Figure 6).

As to claim 4, Weller discloses a system wherein the circumferentially extending rib **18'** includes a second ramp surface to facilitate coaxially aligned linear insertion the body member **12''** into the inner gripping surface of the aperture (Figure 6).

As to claim 5, Weller discloses a system wherein the radially projecting means are helical threads **18'** (Figure 6).

As to claim 7, Weller discloses a system wherein the first end of the body member **12,12''** includes a driving surface, the driving surface **28,29,30,34'** constructed and arranged to cooperate with a driving tool providing rotational force to the body member (Figures 2 and 6).

As to claim 8, Weller discloses a system wherein the driving surface is capable of cooperating with a screwdriver.

As to claim 9, Weller discloses a system wherein the first end of the body member **12,12''** includes a plurality driving surfaces **28,29,30,34'**, the plurality driving surfaces constructed and arranged to cooperate with a driving tool for providing rotational force to the body member (Figures 2 and 6).

As to claim 10, Weller discloses a system wherein the plurality driving surfaces **34'** are adapted cooperate with a hex shaped tool (socket wrench; Figure 6).

As to claim 11, Weller discloses a system wherein the clamping surface consists of a flat point (Figures 2 and 6).

As to claim 12, Weller discloses a system wherein the body member **12,12''** is constructed of metal (metal cross-section; Figures 2 and 6).

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 6, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krüger et al.

As to claim 6, Krüger et al. fail to disclose a system wherein the radially projecting means define ribs **16**.

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Krüger et al. fail to disclose a system wherein the radially projecting means define a knurled surface. The applicant is reminded that a change in the shape of a prior art device is a design consideration within the skill of the art. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a system as disclosed by Krüger et al. to have radially projecting means defining a knurled surface as such practice is a design consideration within the skill of the art.

As to claim 13 and 14, Krüger et al. disclose a system wherein the body member 7 is constructed of metal.

Krüger et al. fail to disclose a system wherein the body member is constructed of polymeric material or rubber. The applicant is reminded that the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a system as disclosed by Krüger et al. to have a body member constructed of polymeric material or rubber as such practice is a design consideration within the skill of the art.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure. The following patents show the state of the art with respect to fastener systems:

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Sato (US 5,746,556) and Sugawara (US 5,333,977) are cited for pertaining to systems having a body member and an expander member.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Ferguson whose telephone number is (703)308-8591. The examiner can normally be reached on M-F (7:30-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (703)308-2686. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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